4 $\mathscr{E} = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$
$A = \{\text{factors of } 6\}$
$B = \{\text{prime numbers}\}$

(a) List the members of the set

(i) $A \cup B$

.....

(1)

(ii) A'

.....

(1)

Harpreet states that $A \cap B = \varnothing$

Harpreet is incorrect.

(b) Explain why.

.....

.....

(1)

C is a set with 4 members such that

the set $A \cap C$ has 2 members
the set $B \cap C$ has 2 members

Set $A \cap C$ and set $B \cap C$ have no members in common.

(c) List the 4 members of set C

.....

(2)

(Total for Question 4 is 5 marks)

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